Abstract of the Disclosure

There are provided an X-ray detector which can realize a larger area without lowering resolution and reducing X-ray detective efficiency when obtaining a matrix construction having a large number of X-ray detecting elements by tiling and a system using the same.

An X-ray detector 104 has a construction in which a plurality of photo-electric modules 111 having a plurality of X-ray detecting elements 110 located in a two-dimensional manner are pasted onto a distribution module 113. The X-ray detecting element 110 has scintillators 112, transparent means 121 and photo-electric means114. These are optically connected to each other. On the edge of the transparent means 121 on one of the photo-electric modules 111 mounted on the distribution module to be adjacent to each other is formed a cutaway part 120 so that the area of an output surface 211 outputting a light to the photo-electric means 114 is smaller than that of an incident surface 210 upon which a light is incident from the scintillators 112. A space caused by the cutaway part 120 is located wiring between the photo-electric module 111 and the distribution module 113 or wiring between the photo-electric modules 111 adjacent to each other.